

CLAIMS

What is claimed is:

1. A connector for use in an infusion set, the connector comprising:

an adaptor body having a proximal section configured for receiving a piece of tubing of an infusion set and a distal section configured for receiving a piece of an infusion set; and

an occluder configured for positioning with the tubing of the infusion set, the occluder being connected to the adaptor body.

2. The connector according to claim 1, wherein the occluder is attached to and spaced from the adaptor body by an arm.

3. The connector according to claim 2, wherein the connector has a channel formed therethrough for conveying fluids, and wherein the arm divides the channel into at least two fluid channels adjacent a proximal end of the proximal section of the adaptor body.

4. The connector according to claim 2, wherein the occluder has a proximal end, and wherein the proximal end is rounded.

5. The connector according to claim 2, wherein occluder has a distal end and wherein the occluder is rounded adjacent its distal end.

6. An infusion set including a connector according to 2, and further comprising a proximal piece of tubing and a distal piece of tubing, and wherein the proximal section of the connector and the occluder are disposed in the proximal piece of tubing and wherein the distal section of the connector is disposed in the distal piece of tubing.

7. The infusion set of claim 6, wherein the proximal piece of tubing is configured to annularly engage the occluder at ambient pressure.

8. A method for forming an infusion set, the method comprising:

selecting a connector having a proximal section, a distal section, and an occluder connected adjacent the proximal section;

mounting a proximal piece of tubing over the occluder and onto the proximal section of the connector; and

mounting a distal piece of tubing over the distal section of the connector.

9. A method for controlling free flow in an infusion set mounted in an infusion pump, the method comprising:

selecting an infusion set having a proximal piece of tubing, a distal piece of tubing and a connector connecting the piece of tubing, the connector having an occluder attached thereto; and

engaging the tubing of the infusion set with a pumping mechanism of the pump so that the connector is disposed downstream from the pumping mechanism.

10. The method according to claim 9, wherein the method further comprises positioning the infusion set so that the occluder is positioned in the proximal piece of the tubing.

11. The method according to claim 9, wherein the method comprises selecting a connector having a proximal section with the proximal piece of tubing of the infusion set being mounted over the proximal section, and positioning the occluder proximally from the proximal section of the connector.

12. A method for selectively controlling free flow through an infusion set, the method comprising:

forming an infusion set having tubing and an occluding mechanism disposed in the tubing which occludes fluid flow through the tubing in an ambient state; and

applying pressure to the tubing to enable flow to pass the occluder and thereby enable fluid flow through the tubing.

13. The method according to claim 12, wherein the occluder comprises a valve.

14. The method according to claim 12, wherein the occluder is generally rigid and has a circular cross-section.

15. The method according to claim 12, wherein the occluder comprises a sphere.

16. The method according to claim 12, wherein the occluder is ellipsoidal.

17. The method according to claim 12, wherein the occluder forms an oval.

18. The method according to claim 12, wherein the occluder forms a disk.

19. A connector for use in an infusion set, the connector comprising:

an adaptor body having a proximal section configured for placement in a tube of an infusion set, and a distal section configured for placement in another tube of the infusion set; and

an occluder attached to the adaptor body configured for insertion into the infusion set.

20. The connector according to claim 19, wherein the occluder is attached to an end of the adaptor body.

21. The connector according to claim 19, wherein the occluder is rounded.

22. An infusion set for delivering medical fluids, the infusion set comprising:

a first tube;

a second tube;

an adaptor connecting the first tube and the second tube; and

an occluder disposed within at least one of the first tube and the second tube.

23. The infusion set according to claim 22, wherein the occluder is attached to the adaptor.

24. The infusion set according to claim 22, wherein the occluder is disposed in the second tube, wherein the second tube has an inner diameter, and wherein the occluder has an outer diameter which is slightly larger than the inner diameter of the second tube.

25. The infusion set according to claim 22, wherein the second tube is radially flexible, and wherein the occluder extends the second tube radially outwardly.

26. A method for controlling flow of solution through a tube, the method comprising;

selecting flexible a tube;

disposing an occluder in the tube; and

compressing the tube adjacent the occluder to open a flow channel between the occluder and the tube.

27. The method according to claim 26, wherein the method further comprises placing a plurality of occluders in series and selectively moving solution past the occluders to form a valve.